U.S. Department of the Interior
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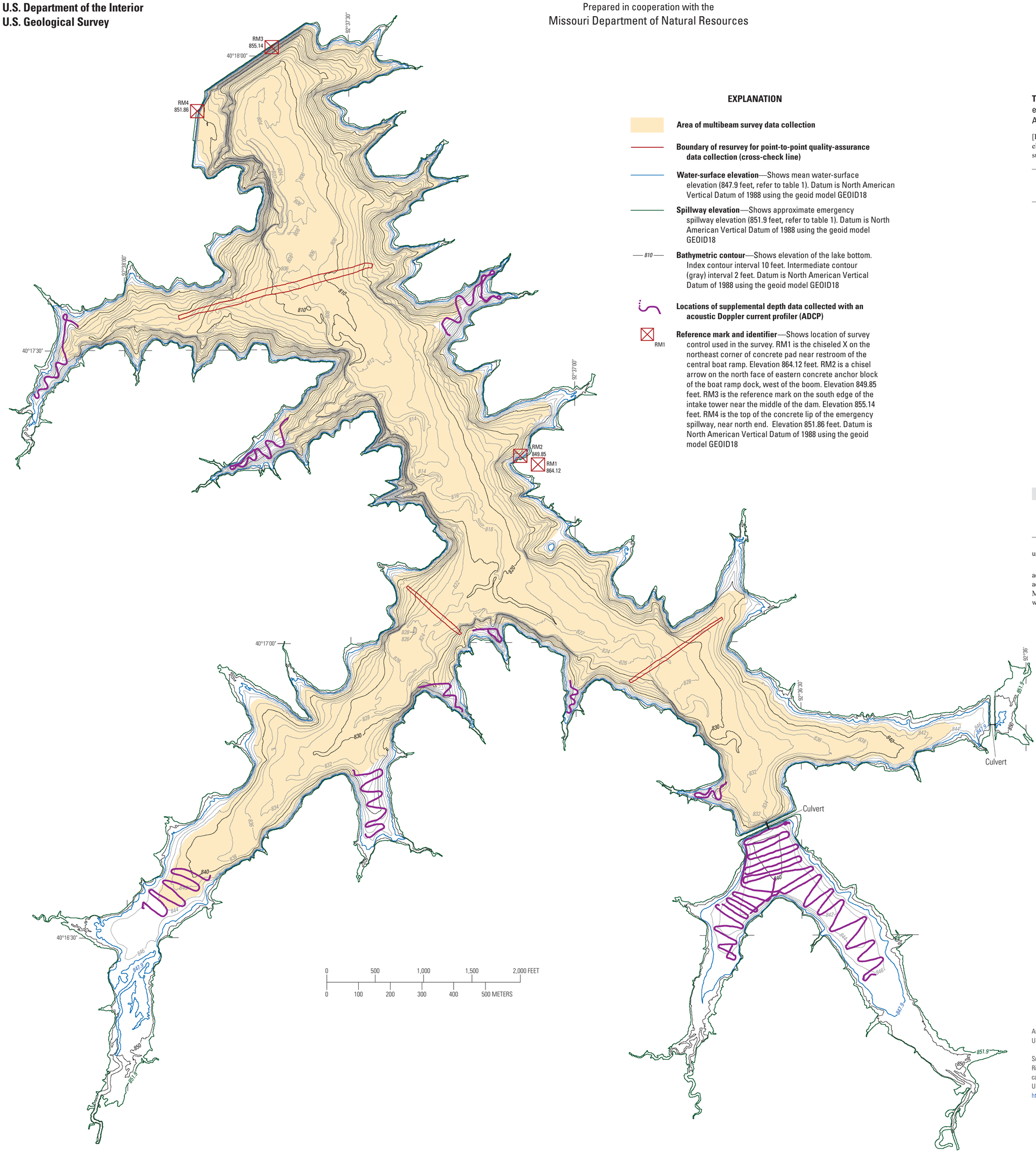
Plate 5 of 12



EXPLANATION

Area of multibeam survey data collection

Boundary of resurvey for point-to-point quality-assurance data collection (cross-check line)

Water-surface elevation—Shows mean water-surface elevation (847.9 feet, refer to table 1). Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

Spillway elevation—Shows approximate emergency spillway elevation (851.9 feet, refer to table 1). Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

810 **Bathymetric contour**—Shows elevation of the lake bottom. Index contour interval 10 feet. Intermediate contour (gray) interval 2 feet. Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

Locations of supplemental depth data collected with an acoustic Doppler current profiler (ADCP)

RM1 **Reference mark and identifier**—Shows location of survey control used in the survey. RM1 is the chiseled X on the northeast corner of concrete pad near restroom of the central boat ramp. Elevation 864.12 feet. RM2 is a chisel arrow on the north face of eastern concrete anchor block of the boat ramp dock, west of the boom. Elevation 849.85 feet. RM3 is the reference mark on the south edge of the intake tower near the middle of the dam. Elevation 855.14 feet. RM4 is the top of the concrete lip of the emergency spillway, near north end. Elevation 851.86 feet. Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

Table 1. Surface area and capacity at specified water-surface elevations for Hazel Creek Lake near Kirksville, Missouri, April 19–20, 2021.

[Primary drop inlet elevation is about 847.9 feet, and emergency spillway elevation is about 851.9 feet; the mean water-surface elevation during the survey was about 847.9 feet (row shaded in the table)]

Water-surface elevation,[1] in feet	Surface area, in acres	Capacity,[2] in acre-feet
802.0	0.78	0.80
804.0	3.86	4.31
806.0	13.6	20.0
808.0	28.5	63.1
810.0	39.7	131
812.0	53.2	224
814.0	68.6	346
816.0	81.8	497
818.0	96.9	676
820.0	114	885
822.0	133	1,130
824.0	154	1,420
826.0	175	1,750
828.0	197	2,120
830.0	219	2,530
832.0	244	3,000
834.0	271	3,510
836.0	296	4,080
838.0	322	4,700
840.0	353	5,370
842.0	392	6,110
844.0	425	6,930
846.0	453	7,810
847.9	493	8,710
848.0	495	8,760
850.0	539	9,790
851.9	580	10,900

[1]Elevations are referenced to the North American Vertical Datum of 1988 using the geoid model GEOID18.

[2]Capacities were calculated from surface testing at 0.27-foot vertical accuracy at a 95-percent confidence level. An explanation of the vertical accuracy calculation can be found in the "Bathymetric Surface, Contour Map, and Bathymetric Change Quality Assurance" section of the report of which this plate is a part.

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Bathymetric Contour Map and Surface Area and Capacity Table for Hazel Creek Lake (lake 27) near Kirksville, Missouri, 2021

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